



Climate and tourism in the Black Forest during the warm season

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Year: 2011
Journal: International Journal of Biometeorology. 55 (2): 173-186

Abstract:

Climate, climate change and tourism all interact. Part of the public discussion about climate change focusses on the tourism sector, with direct and indirect impacts being of equally high relevance. Climate and tourism are closely linked. Thus, climate is a very decisive factor in choices both of destination and of type of journey (active holidays, wellness, and city tours) in the tourism sector. However, whether choices about destinations or types of trip will alter with climate change is difficult to predict. Future climates can be simulated and projected, and the tendencies of climate parameters can be estimated using global and regional climate models. In this paper, the focus is on climate change in the mountainous regions of southwest Germany - the Black Forest. The Black Forest is one of the low mountain ranges where both winter and summer tourism are vulnerable to climate change due to its southern location; the strongest climatic changes are expected in areas covering the south and southwest of Germany. Moreover, as the choice of destination is highly dependent on good weather, a climatic assessment for tourism is essential. Thus, the aim of this study was to estimate climatic changes in mountainous regions during summer, especially for tourism and recreation. The assessment method was based on human-biometeorology as well as tourism-climatologic approaches. Regional climate simulations based on the regional climate model REMO were used for tourism-related climatic analyses. Emission scenarios A1B and B1 were considered for the time period 2021 to 2050, compared to the 30-year base period of 1971-2000, particularly for the warm period of the year, defined here as the months of March-November. In this study, we quantified the frequency, but not the means, of climate parameters. The study results show that global and regional warming is reflected in an increase in annual mean air temperature, especially in autumn. Changes in the spring show a slight negative trend, which is in line with the trend of a decrease in physiologically equivalent temperature as well as in thermal comfort conditions. Due to the rising air temperature, heat stress as well as sultry conditions are projected to become more frequent, affecting human health and recreation, especially at lower lying altitudes. The tops of the mountains and higher elevated areas still have the advantage of offering comfortable climatic conditions. © 2010 ISB.

Source: <http://dx.doi.org/10.1007/s00484-010-0323-3>

Resource Description

Climate Scenario :

specification of climate scenario (set of assumptions about future states related to climate)

Special Report on Emissions Scenarios (SRES), Other Climate Scenario

Special Report on Emissions Scenarios (SRES) Scenario: SRES B1

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Other Climate Scenario: SRES A1B

Exposure : ☒

weather or climate related pathway by which climate change affects health

Meteorological Factors, Precipitation, Temperature

Temperature: Fluctuations

Geographic Feature: ☒

resource focuses on specific type of geography

Mountain

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Germany

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Injury, Other Health Impact

Other Health Impact: heat stress; cold stress

Mitigation/Adaptation: ☒

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☒

type of model used or methodology development is a focus of resource

Outcome Change Prediction

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Medium-Term (10-50 years)

Vulnerability/Impact Assessment: ☒

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resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content